

WHAT IS CLAIMED IS:

1. A fuel supply system installed inside a fuel tank to supply fuel out of the fuel tank, the fuel supply system comprising:

a cover, which is attached to the fuel tank; and

a pump unit that includes an electric fuel pump, which pumps fuel; and

a connecting member, which connects between the cover and the pump unit in a manner that allows relative movement between the cover and the pump unit, wherein the pump unit further includes a supporting portion, which has:

a through hole that penetrates through the supporting portion and axially slidably receives the connecting member in a reciprocable manner; and

at least one groove that is recessed in an inner peripheral surface of the supporting portion, which is slidably engageable with the connecting member.

2. The fuel supply system according to claim 1, wherein the at least one groove extends in an axial direction of the through hole.

3. The fuel supply system according to claim 1, wherein the at least one groove includes a plurality of grooves, which are arranged in a circumferential direction of the supporting portion.

4. The fuel supply system according to claim 3, wherein:
the inner peripheral surface of the supporting portion are

divided into a plurality of surface sub-sections by the grooves; and
each groove, a central axis of the through hole and a
corresponding one of the surface sub-sections are aligned along an
imaginary line in a plane perpendicular to the central axis of the
through hole.

5. The fuel supply system according to claim 1, wherein a material
of the connecting member is different from a material of the supporting
portion.

6. The fuel supply system according to claim 1, wherein the pump
unit further includes a sub-tank, which receives the fuel pump.

7. The fuel supply system according to claim 6, wherein the
supporting portion is disposed inside the sub-tank.

8. The fuel supply system according to claim 6, wherein the
supporting portion is disposed outside the sub-tank.

9. The fuel supply system according to claim 8, wherein:
the sub-tank includes a recess, which is formed by radially
inwardly recessing a portion of an outer peripheral wall of the
sub-tank; and

the supporting portion is positioned in the recess.

10. The fuel supply system according to claim 8, wherein the sub-tank
has a projection, which projects radially outward from the sub-tank

and is engageable with an end of the connecting member, which is opposite from the cover.